The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL EDWARD BASKEY, MARK LINUS BAUMAN, BOB RICHARD CERNOHOUS, JOHN CHARLES KASPERSKI, and STEVEN JOHN SIMONSON

Appeal 2007-1238
Application 10/037,595
Technology Center 2100

Decided: September 7, 2007

Before HOWARD B. BLANKENSHIP, ALLEN R. MaCDONALD, and JEAN R. HOMERE, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1 through 3, 5 through 10, 12, 13, and 15 through 34. Claims 4, 11, and 14 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b) to decide this appeal. We affirm.

Appellants invented a method and system for controlling the usage of a system-supplied buffer during the exchange of data between applications of a server and applications of a client via a network-based socket in a distributed computing environment. Particularly, the invention entails (1) allocating the system-supplied buffer to a server application; (2) reading a packet data received by the server application into the allocated buffer and, (3) sending the packet data to a client application via the network-based socket (Specification 5).

An understanding of the invention can be derived from exemplary independent claim 1, which reads as follows:

1. A method of processing messages in a computer, comprising:

in response to a request from a server application, allocating a system-supplied buffer to the server application, wherein the server application is configured to exchange data with a client application running on another computer using a network-based socket, and wherein the system supplied buffer is of a sufficient size to contain the data;

writing the data to the system-supplied buffer,

passing the system-supplied buffer to the network-based socket to allow the server application to continue processing while the data is sent to the client; and

sending, by way of the network-based socket, the data from the system-supplied buffer to the other computer via a network; and

freeing memory consumed by the system supplied buffer.

In rejecting the claims on appeal, the Examiner relies upon the following prior art:

Beighe	US 6,055,576	Apr. 25, 2000
Nair	US 2003/0217184	Nov. 20, 2003 (filed Dec. 30, 2000)
Putcha	US 6,822,966	Nov. 23, 2004 (filed Mar. 1, 1999)

The Examiner rejects the claims on appeal as follows:

A. Claims 1 through 3, 5 through 10, 12, 13, 15 through 21, and 24 through 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Nair and Beighe.

B. Claims 22, 23, and 32 through 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Nair, Beighe, and Putcha.

Appellants contend[1] that the combination of Nair and Beighe does not render the claimed invention unpatentable. (Br. 13.) Particularly, Appellants contend that Nair does not teach or suggest allocating a system-supplied buffer to a server application in response to a request from the server application, as recited in independent claim 1. More specifically, Appellants assert the following:

> "Because Nair is directed to the use of a localized buffer pool used exclusively by the protocol modules, Nair fails to disclose a system supplied buffer being allocated to a server application. In fact, Nair discloses that once the data frame is provided to the server application

[1] This decision considers only those arguments that Appellants submitted in the Appeal and Reply Briefs. Arguments that Appellants could have made but chose not to make in the Brief are deemed to have been waived. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2005). *See also In re Watts*, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

> "**the buffer [used by the network protocol software modules] is no longer needed.**" Clearly, the operations performed by the server application are distinct from those used to manage a buffer within different layers of the protocol stack. The present claims, however, are directed to processing that occurs after data has been processed through a protocol communications stack, i.e., after the data is, in the words of Nair, "provided to an application software program." Thus, Applicants submit that Nair fails to disclose allocating a system-supplied buffer to the server application in response to a request from a server application. (*Id.*)

Appellants reiterate these same arguments in the Reply Brief. Particularly, at page 4 of the Reply Brief, Appellants state the following:

> The Examiner maintains the position that Nair's discussion of the operations of certain "protocol software modules discloses the method claimed by Applicants. More specifically, the Examiner suggests that the term "protocol software modules" (as disclosed in Nair) may be used interchangeably with that of a "server application" (as claimed by Applicants). Respectfully, Applicants disagree. The "protocol software modules" discussed in Nair are limited to TCP (and lower) layers of a TCP/IP stack and further, Nair expressly distinguishes the operations of these "protocol software modules" from those of a high level application (e.g., the server application claimed by Applicants).

In response, the Examiner contends that the protocol software modules in Nair, similarly to the server applications of the claimed invention, access the allocated memory buffers via a protocol module for the application layer. Therefore, the combination of Nair with Beighe does render the claimed invention unpatentable. (Answer 14 and 15.)

ISSUES

The *pivotal* issue in the appeal before us is as follows:

Have Appellants shown[2] that the Examiner failed to establish that one of ordinary skill in the art, at the time of the invention, would have found that the combined disclosures of Nair and Beighe render the claimed invention unpatentable under 35 U.S.C. § 103(a)? More particularly, would the ordinarily skilled artisan have found that Nair's disclosure of allocating buffers to the protocol software modules teaches Appellants' claimed allocation of buffers to server applications?

FINDINGS OF FACT

The following findings of fact are supported by a preponderance of the evidence.

The Invention

1. Appellants invented a method and system for controlling the usage of a system-supplied buffer (356) during the exchange of data between applications of a server (310) and applications of a client (370) via a network-based socket (404) in a distributed computing environment (300). (Specification 5 and 10.)

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[2] In the examination of a patent application, the Examiner bears the initial burden of showing a prima facie case of unpatentability. *In re Piasecki* 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). When that burden is met, the burden then shifts to the applicant to rebut. *Id.*; *see also In re Harris*, 409 F.3d 1339, 1343-44, 74 USPQ2d 1951, 1954-55 (Fed. Cir. 2005) (finding rebuttal evidence unpersuasive). If the applicant produces rebuttal evidence of adequate weight, the prima facie case of unpatentability is dissipated. *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788. Thereafter, patentability is determined in view of the entire record. *Id.* However, on appeal to the Board it is an appellant's burden to establish that the Examiner did not sustain the necessary burden and to show that the Examiner erred -- on appeal we will not start with a presumption that the Examiner is wrong.

2. As depicted in Figure 3, the invention allocates the system-supplied buffer (356) to a server application (350) in response to a request from the server application (350). (*Id.* 10.)

3. The data to be exchanged between the server applications and the client applications is read into the allocated buffer, which is of sufficient size to contain the data. (*Id.*)

4. The system-supplied buffer is subsequently forwarded to the network-based socket (404), which in turn sends the data to the client application while allowing the server application to continue processing data (*Id.* 21.)

The Prior Art Relied upon

5. Nair teaches a method and system for allocating buffers shared among protocol layers in a protocol stack (e.g. a machine connected to an ATM network). Nair also teaches that the ATM network services higher layer protocol software modules (e.g. IP software module) in protocol stack implemented machines. (Title, paragraphs [0017] through [0019][3].)

6. Nair teaches a buffer manager for allocating a memory buffer of appropriate size from a pool of available memory buffers to the

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[3] Particularly, paragraph [0019] of Nair states the following:

> "The ATM driver services higher layer protocol software modules in protocol stack implemented in the machine, such as PPP over ATM adaptation layer 5 (PPP over AAL5) software module 107 and Point to Point Protocol (PPP) software module 109. These modules, in turn, service, for example, a higher layer protocol software module such as IP software module 110. Likewise, the Ethernet driver services the IP software module 110. Finally, IP software module 110 services TCP software module 112." (Emphasis added.)

communication protocol software module to temporarily store a received a data frame. (Paragraph [0025].)

7. Nair teaches that a buffer manager allocates a memory buffer space to a protocol software module to store a received data frame. The buffer manager subsequently passes a pointer to all the protocol software modules that desire to access the received data frame in the shared buffer space without having to copy said data frame from one buffer space to another. (Paragraph [0020] and [0021].)

PRINCIPLES OF LAW

1. OBVIOUSNESS (Prima Facie)

The Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966), stated that three factual inquiries underpin any determination of obviousness:

> Under § 103, [1] the scope and content of the prior art are to be determined; [2] differences between the prior art and the claims at issue are to be ascertained; and [3] the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

Where the claimed subject matter involves more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, a holding of obviousness must be based on "an apparent reason to combine the known

elements in the fashion claimed." *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007). That is, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, 127 S. Ct. at 1741, 82 USPQ2d at 1396 (quoting *In re Kahn*, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)). Such reasoning can be based on interrelated teachings of multiple patents, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art. *KSR*, 127 S. Ct. at 1740-41, 82 USPQ2d at 1396.

ANALYSIS

35 U.S.C. § 103(a) REJECTION

We begin our analysis by noting that all the independent claims (1, 12 and 24), currently pending before us, require the limitation of allocating a system-supplied buffer to a server application in response to a request from the server application. (Br. Appendix A.) As detailed in the Findings of Fact section above, we found that Nair teaches allocating a memory buffer space to a protocol software module in order to temporarily store therein a received data frame and for providing shared access to said buffer space to the protocol software modules. (Findings 6 and 7.) Further, we found that Nair teaches that the software modules are higher layer protocol modules that are serviced by ATM drivers. (Finding 5.) It is our view that one of ordinary skill in the art would have readily recognized from Nair's disclosure that the protocol software modules are allocated buffer space to store data frames before they are forwarded to the their destination via the

ATM protocol stack. Particularly, the ordinary skilled artisan would have aptly appreciated that the disclosed protocol software modules, which operate on higher layers of the OSI model, are capable of performing the same functions of Appellants' server applications. That is, both the disclosed protocol software modules and the server applications can request buffer space to store a receive data frame, and they can subsequently forward said data frame to its destination via an upper layer protocol. Therefore, we conclude that the Examiner did not err in rejecting claims 1 through 3, 5 through 10, 12, 13, 15 through 21, and 24 through 31 as being unpatentable over the combination of Nair and Beighe.

Appellants did not provide separate arguments with respect to the rejection of dependent claims 22, 23, and 32 through 34 as being unpatentable over the combination of Nair, Beighe, and Putcha. Therefore, they fall together with independent claims 12 and 24. *See In re Young,* 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991). *See also* 37 C.F.R. § 41.37(c)(1)(vii).

CONCLUSION OF LAW

On the record before us, Appellants have not shown that the Examiner failed to establish that claims 1 through 3, 5 through 10, 12, 13, 15 through 21, and 24 through 31 are unpatentable over the combination of Nair and Beighe under 35 U.S.C. § 103(a). Further, Appellants have not shown that the Examiner failed to establish that claims 22, 23, and 32 through 34 are unpatentable over the combination of Nair, Beighe, and Putcha under 35 U.S.C. § 103(a).

DECISION

We have affirmed the Examiner's decision rejecting claims 1 through 3, 5 through 10, 12, 13, and 15 through 34.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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